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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Complete if Known

Application Number	10/519,821
Filing Date	December 30, 2004
First Named Inventor	Henry Daniell
Art Unit	1638
Examiner Name	Anne R. Kubelik
Attorney Docket Number	CHL-T107C2Z2

Sheet

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of

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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	U1	US-5,932,479	03-08-1999	Daniell <i>et al.</i>	All
	U2	US-5,693,507	12-02-1997	Daniell <i>et al.</i>	All
	U3	US-			
	U4	US-			
	U5	US-			
	U6	US-			
	U7	US-			
	U8	US-			
	U9	US-			

FOREIGN PATENT DOCUMENTS

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Sheet	2	of	5	Attorney Docket Number	CHL-T107C2Z2

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	R1	APSE, M.P. <i>et al.</i> , "Engineering salt tolerance in plants", <i>Current opinion in Biotechnol.</i> , 2002, pp. 146-150, Vol. 213.	
	R2	CORNEILLE, S., <i>et al.</i> "Efficient elimination of selectable marker genes from the plastid genome by the CRE-lox site-specific recombination system", <i>Plant J.</i> , 2001, pp. 171-178, Vol. 27.	
	R3	DANIELL, H., <i>et al.</i> "Multigene engineering: Dawn of an exciting new era in biotechnology", <i>Curr. Opin. Biotechnol.</i> , 2002, pp. 136-141 Vol. 13.	
	R4	DANIELL, H. <i>et al.</i> , "Transient foreign gene-expression in chloroplasts of cultured tobacco cells after biolistic delivery of chloroplast vectors", <i>Proc. Natl. Acad. Sci. U. S. A.</i> , 1990, pp. 88-92, Vol. 87.	
	R5	DANIELL, H., "Medical molecular farming: production of antibodies, biopharmaceuticals and edible vaccines in plants", <i>Trends in Plant Sci.</i> , 2001, pp. 219-226, Vol. 6, No. 5.	
	R6	DANIELL, H., "Molecular strategies for gene containment in transgenic crops", <i>Nature Biotechnol.</i> , 2002, pp. 581-586, Vol. 20.	
	R7	DANIELL, H., "Transformation and foreign gene expression in plants mediated by microparticle bombardment", <i>Methods Mol. Biol.</i> , 1997, pp. 463-489, Vol. 62.	
	R8	DANIELL, H., <i>et al.</i> , "Containment of herbicide resistance through genetic engineering of the chloroplast genome", <i>Nat. Biotechnol.</i> , 1998, pp. 345-348, Vol. 16.	
	R9	DANIELL, H., <i>et al.</i> , "Milestones in chloroplast genetic engineering: an environmentally friendly era in biotechnology", <i>Trends Plant Sci.</i> , 2002, pp. 84-91, Vol. 7, No. 2.	
	R10	DANIELL, H., <i>et al.</i> , "Expression of Native cholera toxin B subunit gene and assembly as functional oligomers in transgenic tobacco chloroplasts", <i>J. Mol. Biol.</i> , 2001, pp. 1001-1009 Vol. 311.	
	R11	DANIELL, H., <i>et al.</i> , "Marker free transgenic plants: engineering the chloroplast genome without the use of antibiotic selection", <i>Curr. Genet.</i> , 2001, pp. 109-116, Vol. 39.	
	R12	DECOSA, B., <i>et al.</i> , "Overexpression of the <i>Bt</i> Cry2Aa2 operon in chloroplasts leads to formation of insecticidal crystals", <i>Nat. Biotechnol.</i> , 2001, pp. 71-74 Vol. 19.	

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			Group Art Unit	1638	
			Examiner Name	Anne R. Kubelik	
Sheet	3	of	5	Attorney Docket Number	CHL-T107C2Z2

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	R13	DEGRAY, G. <i>et al.</i> , "Expression of an antimicrobial peptide via the chloroplast genome to control phytopathogenic bacteria and fungi", <i>Plant Physiol.</i> , 2001, pp. 852-862, Vol. 127.	
	R14	FIGUEROA-SOTO, C.G. <i>et al.</i> , "Immunolocalization of Betaine Aldehyde Dehydrogenase in Porcine Kidney", <i>Biochemical and Biophysical Research Communications.</i> , 1999, pp. 732-736 Vol. 258, No. 3.	
	R15	GAMBORG, O.L., <i>et al.</i> , Nutrient requirements of suspension cultures of soybean root cells. <i>Exp. Cell Res.</i> 1968, pp. 151-158, Vol. 50, No. 1 (Abstract Only)	
	R16	GUDA, C., <i>et al.</i> , "Stable expression of biodegradable protein-based polymer in tobacco chloroplasts", <i>Plant Cell Rep.</i> , 2000, pp. 257-262 Vol. 19.	
	R17	HAJDUKIEWICZ, P., <i>et al.</i> , "Multiple pathways for Cre/lox-mediated recombination in plastids", <i>Plant J.</i> , 2001, pp. 161-170, Vol. 27(2).	
	R18	HIBBERD, J. M. <i>et al.</i> "Transient expression of green fluorescent protein in various plastid types following microprojectile bombardment", <i>The Plant Journal</i> , 1998, pp. 627-632, Vol. 16, No. 5.	
	R19	HOU, B-K. <i>et al.</i> , "Chloroplast Transformation in Oilseed Rape", <i>Transgenic Res.</i> 2003, pp. 111-114 Vol. 12.	
	R20	HUANG, F.C. <i>et al.</i> , "Efficient plastid transformation in tobacco using the <i>aphA-6</i> gene and kanamycin selection", <i>Mol. Gen. Genomics</i> , 2002, pp. 19-27, Vol. 268.	
	R21	INCHAROENSAKDI, A. <i>et al.</i> , "Salt stress enhances choline uptake in the halotolerant cyanobacterium <i>Aphanothece halophytica</i> " <i>Biochimica et Biophysica Acta (BBA)</i> 2003, pp. 102-109, Vol. 1621.	
	R22	IAMTHAM, S., <i>et al.</i> , "Removal of antibiotic resistance genes from transgenic tobacco plastids", <i>Nat. Biotechnol.</i> : 2000, pp. 1172-1176, Vol. 18.	
	R23	KHAN, M. S. <i>et al.</i> , "Fluorescent antibiotic resistance marker for tracking plastid transformation in higher plants", <i>Nat. Biotechnol.</i> 1999, pp. 910-915, Vol. 17.	
	R24	KOTA, M. <i>et al.</i> "Overexpression of the <i>Bacillus thuringiensis</i> (Bt) Cry2Aa2 protein in chloroplasts confers resistance to plants against susceptible and Bt-resistant insects", <i>Proc. Natl. Acad. Sci. USA</i> , 1999, pp. 1840-1845, Vol. 96.	

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			Group Art Unit	1638	
			Examiner Name	Anne R. Kubelik	
Sheet	4	of	5	Attorney Docket Number	CHL-T107C2Z2

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	R25	LAEMMLI, U.K. "Cleavage of structural proteins during the assembly of the head of bacteriophage T4", <i>Nature</i> , 1970, pp. 680-685, Vol. 227.	
	R26	LARKIN, P.J. <i>et al.</i> , "Somaclonal variation - a novel source of variability from cell cultures for plant improvement", <i>Theor. Appl. Genet.</i> , 1981, pp. 197-214, Vol. 60.	
	R27	MCBRIDE, K.E. <i>et al.</i> , "Amplification of a chimeric Bacillus gene in chloroplasts leads to an extraordinary level of an insecticidal protein in tobacco" <i>Bio/Technology</i> , 1995, pp. 362-365, Vol. 13.	
	R28	MILLAN, F-S. A. <i>et al.</i> , "A chloroplast transgenic approach to hyper-express and purify human serum albumin, a protein highly susceptible to proteolytic degradation", <i>Plant Biotechnol. J.</i> , 2003, pp. 71-79, Vol. 1.	
	R29	MOGHAIEB, R.E.A. <i>et al.</i> , "Expression of betaine aldehyde dehydrogenase gene in transgenic tomato hairy roots leads to the accumulation of glycine betaine and contributes to the maintenance of the osmotic potential under salt stress", <i>Soil Science and Plant Nutrition</i> , 2000, pp. 873-883, Vol. 46.	
	R30	NAGAMORI, E. <i>et al.</i> , "Release of Embryogenic Carrot Cells with High Regeneration Potency from Immobilized Alginate Beads", <i>Journal of Bioscience and Bioengineering</i> , 1999, 226-228, Vol. 88.	
	R31	PREDIERI, S., "Mutation induction and tissue culture in improving fruits", <i>Plant cell, tissue and organ culture</i> , 2001, pp. 185-210, Vol. 64. (Abstract Only)	
	R32	RONTEIN, D. <i>et al.</i> , "Metabolic Engineering of Osmoprotectant Accumulation in Plants", <i>Metabolic Engineering</i> , 2002, pp. 49-56, Vol. 4.	
	R33	RUF, S. <i>et al.</i> , "Stable genetic transformation of tomato plastids and expression of a foreign protein in fruit", <i>Nat. Biotechnol.</i> , 2001, pp. 870-875, Vol. 19.	
	R34	RUIZ, O.N., <i>et al.</i> , "Phytoremediation of organomercurial compounds via chloroplast genetic engineering", <i>Plant Physiol.</i> , 2003, pp. 1344-1352	
	R35	SASAKI, Y. <i>et al.</i> , "Correlation of plastid DNA copy number with plastid gene-expression in various organs in mature pea-plants (<i>Pisum sativum</i> L)", <i>Plant Cell Physiol.</i> , 1990, pp. 925-931, Vol. 3, No. 7 (Abstract Only).	
	R36	SERRA, E. C. <i>et al.</i> , "DNA polymerase activity of tomato fruit chromoplasts", <i>FEBS Letters</i> . 1990, pp. 102-106 Vol. 275.	

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	R37	SHINOZAKI, K. <i>et al.</i> , "The complete nucleotide sequence of the tobacco chloroplast genome: its gene organization and expression", <i>EMBO J.</i> , 1986, pp. 2043-2049, Vol. 5.	
	R38	SIDOROV, V.A. <i>et al.</i> , "Technical advance: stable chloroplast transformation in potato: use of green fluorescent protein as a plastid marker", <i>Plant J.</i> , 1999, pp. 209-216, Vol. 19.	
	R39	SIKDAR, S.R. <i>et al.</i> , "Plastid transformation in Arabidopsis thaliana", <i>Plant Cell. Rep.</i> , 1998, pp. 20-24, Vol. 18, No. 1 (Abstract Only).	
	R40	STAUB, J.M. <i>et al.</i> , "High-yield production of a human therapeutic protein in tobacco chloroplasts", <i>Nat. Biotechnol.</i> , 2000, pp. 333-338, Vol. 18., No. (Abstract only)	
	R41	TESSERAU, H. <i>et al.</i> , "Cryopreservation of somatic embryos: A tool for germplasm storage and commercial delivery of selected plants" <i>Annals of Botany</i> , 1994, pp. 547-555, Vol. 74.	
	R42	TIMBERT, R. <i>et al.</i> , "Enhancing carrot somatic embryos survival during slow dehydration, by encapsulation and control of dehydration", <i>Plant Sci.</i> , 1996, pp. 215-222, Vol. 120, No. 2. (Abstract Only)	
	R43	TREGONING, J.S. <i>et al.</i> , "Expression of tetanus toxin Fragment C in tobacco chloroplasts", <i>Nucleic Acids Res.</i> 2003, pp. 1174-1179, Vol. 31, No. 4.	
	R44	VALENZUELA-SOTO, E.M. <i>et al.</i> , "Purification and properties of betaine aldehyde dehydrogenase extracted from detached leaves of <i>Amaranthus hypochondriacus</i> L. subjected to water deficit" <i>J. Plant Physiol.</i> , 1994, pp. 145-152, Vol. 143, No. 2. (Abstract Only)	
	R45	VELASCO-GARCIA, R. <i>et al.</i> , "Steady-state kinetic mechanism of the NADP ⁺ -and NAD ⁺ -dependent reaction catalysed by betaine aldehyde dehydrogenase from <i>Pseudomonas aeruginosa</i> ", <i>Biochem. J.</i> , 2000, pp. 675-683, Vol. 352.	
	R46	VIVEK, B.S. <i>et al.</i> , "Evidence for maternal inheritance of the chloroplast genome in cultivated carrot (<i>Daucus carota</i> L. ssp. <i>Sativus</i>)", <i>Theor Appl Genet.</i> , 1999, pp. 669-672, Vol. 98.	
	R47	YAN, W. <i>et al.</i> , "Reanalysis of vernalization data of wheat and carrot", <i>Annals of Botany</i> , 1999, pp. 615-619, Vol. 84.	
	R48	YE <i>et al.</i> , "Plastid-expressed 5-enolpyruvylshikimate-3-phosphate synthase genes provide high level glyphosate tolerance in tobacco", 2001, pp. 261-270, Vol 25, No. 3.	

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